



»»» Stamford, CT EID
ESPC and microgrid
project update
March 18th, 2014

energy
solutions
for a
sustainable
future

ESPC PROJECT UPDATE

- Preliminary Assessment building set under development
 - Government Center + 6 schools (4 are shelters)
 - Clinton Manor & Post House participation to inform decision
- RFP under development, target May release
 - Draft reviewed with Beverly Aveni, 2nd review today
 - Technical facility profile under development
 - CEI & Nancy Pipicelli visits, data gathering at schools & SGC
 - CEI visited Clinton Manor, soon Post House
- DEEP grant RFP issued, timing & screening constraints
- CEFIA funding options; Matt Ward re DOE grant(s)

Candidate buildings & capital cost scoping estimate

20% cost savings could support ~\$1.8M in microgrid costs

Facility	Current Size	Electric Use	Gas Use	Water Use	Electric Cost	Gas Cost	Water Cost	Total Costs	Total Use	Energy Use Index	Energy Cost Index	Energy Star rating
	SF	kWh	Therms	Kgal	\$	\$	\$	(\$)	KBTU	KBTU/SF /YR	\$/SF	(1-100)
Cloonan Middle School (shelter)	159463				148,618	49,451	5,908	\$ 203,977	0	97	\$ 1.28	46
Rippowam Middle School (shelter)	227700				203,182	81,328	8,763	\$ 293,273	0	100	\$ 1.29	37
Roxbury Elementary & Annex School	86706				95,407	43,001	3,571	\$ 141,979	0	128	\$ 1.64	39
Scofield Middle Magnet (shelter)	147526				218,694	31,390	5,203	\$ 255,287	0	116	\$ 1.73	50
Stamford Government Center	272000				710,000	90000		\$ 800,000	0	216	\$ 2.94	55
Stamford High School (shelter)	381408				500,480	183,453	18,153	\$ 702,086	0	134	\$ 1.84	59
Westhill High & Agriscience School	407807				639,952	197,379	14,959	\$ 852,290	0	160	\$ 2.09	53
Totals:	1,682,610	0	0	0	\$2,516,333	\$ 647,389	\$ 56,557	\$3,248,892	0	0.0	\$ 1.93	
								Actuals:				
								Estimated Savings: (20%)	\$ 649,778			
								O&M Savings: (10% of energy)	\$ 64,978			
								Total Savings:	\$ 714,756			
								ECM Project Cost: (10 yr payback)	\$7,147,562			
								Infrastructure Costs: (25% of ECMs)	\$1,786,891	<- Microgrid infrastructure		
								Total Costs:	\$8,934,453			
								Third Party Fees (~2%): (Already in costs)				
								ECMs + Infrastructure:	\$ 178,689			
								ECMs only:	\$ 142,951			

ESPC critical path & schedule

- Phase 1: ESCO selection
 - 3–6 months (March to June 2014)
 - Issue RFP May 2014?
 - DEEP grant round 2 due August 2014
- Phase 2a: Investment Grade Audit, finalize contract
 - 3–6 months (fall into winter 2014)
- Phase 2b: design, construction, commissioning
 - 12–18 months (winter 2014 to winter 2015–spring 2016)
- Phase 3: performance period
 - 15–20 years (2015–2016 to 2030–2040)

DEEP ROUND 2 RFP

- Issued March 6th, due August 6th
 - Reimburse \$50k in development costs
- Threshold criteria, then detailed criteria
 - Threshold criteria concern re 25% diesel gen max & need to serve loads not served by existing emergency generation
 - Ability to operate for 2 weeks
 - Mitigate flood risk, withstand & maintain access in Cat 1 hurricane
 - Contractors & subs acquired via competitive selection process
 - Detailed criteria: financial plan including generation financing
- Review criteria
 - 25% technical; 45% financial/managerial/operational capability; 20% social benefits; 10% environmental benefits

CEFIA FINANCING OPTIONS

- CEFIA microgrid financing
 - Wait until projects pass DEEP threshold criteria, approach as set
 - Developing RFP to capital providers for microgrids
 - CEFIA can help ID funders, or counsel City on bond issuance
- Emphasis on existing tools & capitalized programs
 - C-PACE, Solar Lease II, PPA
 - Help arrange or support financing, credit enhancement
 - Help derisk loan to make it more affordable
 - CHP RFP (RECs); CEFIA can pre-purchase RECs
 - State pilot fund through 2016: CHP non-grant support <\$450/kW
- More microgrid-targeted funds planned for DEEP Round 3

Microgrid financial structure

